

4130N 3/8'

Work Order ID 145176

145176

Page 1

May 03, 2016 3:56:46 PM

Item ID: 647.7712

Revision ID:

Item Name: Strut Tube

Start Date: 5/9/2016

Start Qty: 12.00

12

Required Date: 5/24/2016

Req'd Qty: 12.00

12

Reference:

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

Customer:

Approvals:

Process Plan: SADate: 20160503

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

647.7700

A1

100

0.00

100

Hardinge CNC LATHE SMALL

Hardinge

Memo

0.00

Hardinge CNC Lathe Small

Machine as per folio FB148

FOLIO REV: AADWG REV: A

Deburr

DAS

49

9-89

16/05/16

53

φ

110

0.00

110

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

DAS

49

9-89

16/05/16

53

φ

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 145176

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145176

Page 2

Item ID: 647.7712 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Strut Tube
 Start Date: 5/9/2016 Start Qty: 12.00 ***12*** Cust Item ID:
 Required Date: 5/24/2016 Req'd Qty: 12.00 ***12*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC8- Inspect parts - second check	0.00				53	4		DAS 45 9-89 2016-5-16
120									
QC	Memo	0.00							
Quality Control									
130	Identify as per dwg & Stock Location <i>QCK 114</i>	0.00				53			DAS 6 9-89 MAY 17 2016
130									
Packaging	Memo	0.00							
Packaging									
140	QC21- Final Inspection - Work Order Release	0.00							16/5/18 <i>JA</i>
140									
QC	Memo	0.00							
Quality Control									

MCS MAY 18 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
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Root Cause		FAULT CATEGORY																							
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Picklist Print

May 03, 2016 3:56:52 PM

Page 1

Work Order ID: 145176

145176

Parent Item: 647.7712

647 7712

Parent Item Name: Strut Tube

Start Date: 5/9/2016

Required Date: 5/24/2016

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP REV:A NEW ISSUE 12-11-06 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M4130NR0.375		Purchased		No			f	14.0000		0.631579			

M4130NR0 375

4130 steel RD bar .375"

Location

Loc Qty

Loc Code

MAT032

14

m133597

2

m134220

12

2
1.36

DAS
49
9-89

16/05/16



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.

05110

SHEET 1 OF 1

DWG NO. 647.7700

REV: A

PREPARED
BY

A. QUAN

DATE: 08/21/15

EFFECT ON DWG

☐ INC. ☒ UNINC.

DWG TITLE: STRUT ASSY

APPROVED BY:

ENGR

MFG

QC

EFF.

CURRENT ORDER

TRANSACTION CODES (TC):

A-ADD

C-CREATE

R-REVISE

D-DELETE

REASON: REVISED FINISH CALLOUT AS PER ECR 15-209

SHEET 1, NOTES IS:

ACTION: UPDATE MO & WO

NOTES:

- 1 MATERIAL: 4130 STEEL PER AMS-T-6736 .50" OD, .083" WALL THK.
- 2 MATERIAL: 4130 STEEL PER AMS-T-6736 .375" OD, .075" WALL THK.
- 3 MATERIAL: 4130 STEEL PER AMS-T-6736 .324" OD.
- 4 FINISH: PRIME IAW MIL-P-2337J TYPE I CLASS N; 1-2 MIL MAX
5. DEBURR AND BREAK ALL SHARP EDGES
6. IDENTIFY IAW MPP-120.
- 7 WELD IAW MIL-STD-2219. TIG WELD WITH FILLER ROD
- 8 FINISH: CAD PLATE IAW QQ-P-416F CLASS I TYPE II
- 9 MASK THREAD PRIOR TO FINISH

209901
SHA 145176

F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION
DOCUMENTS EFFECTED:					
☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM					
CHANGE CATEGORY				DER REVIEW REQUIRED	
☐ MAJOR ☐ MINOR				☐ YES ☐ NO	

1. MATERIAL: 4130 STEEL PER AMS-T-6736, .50" OD, .083" WALL THK.
2. MATERIAL: 4130 STEEL PER AMS-T-6736, .375" OD, .075" WALL THK.
3. MATERIAL: 4130 STEEL PER AMS-T-6736, .324" OD.
4. FINISH: PRIME IAW MIL-P-2337J TYPE I CLASS N; 1-2 MIL MAX
5. DEBURR AND BREAK ALL SHARP EDGES
6. IDENTIFY IAW MPP-120.
7. WELD IAW MIL-STD-2219. TIG WELD WITH FILLER ROD
8. FINISH: CAD PLATE IAW MIL-C-5541 CLASS 1A.
9. MASK THREAD PRIOR TO FINISH

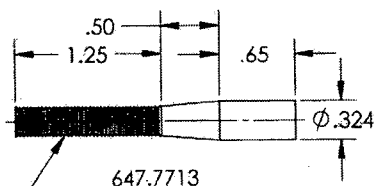
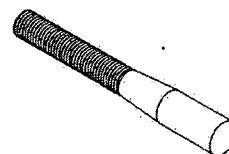
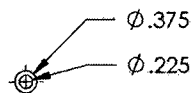
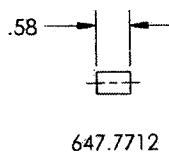
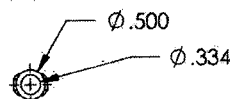
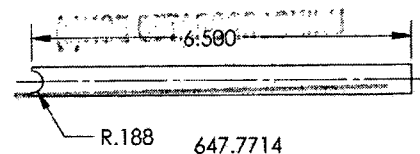
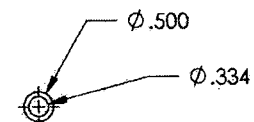
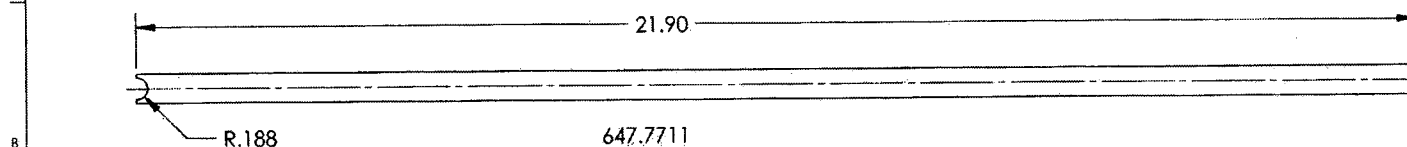
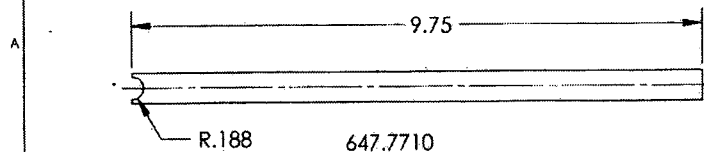
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVE
	LAST PROTOTYPE REVISIONS EPC		NIC
NIC	INITIAL RELEASE	12/02/04	P. BRAVO
A	INCORPORATED ECU DATA	11/10/14	P. BRAVO

UNINCORPORATED ECN(S)

05110

1		5	647.7714	STRUT TUBE	△	
1	1	1	647.7713	STRUT THREAD	△	△
1	1	1	647.7712	STRUT TUBE	△	
	1	2	647.7711	STRUT TUBE	△	
		1	647.7710	STRUT TUBE	△	
△	△		647.7703	STRUT ASSY		△ △
△	△		647.7702	STRUT ASSY		△ △
△	△		647.7701	STRUT ASSY		△ △
7703	7702	7701	FIND #	PART #	DESCRIPTION	MATL SPEC.
QTY			PARTS LIST			
NEXT ASSY (S)			APRIL 1970			
647.7300			DRAWN BY: J. M. CROSBY			
646.4000			CHECKED BY: J. M. CROSBY			
			DESIGNED BY: J. M. CROSBY			
			APPROVED BY: J. M. CROSBY			
			CONTRACT NO. 1000000000			
			UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACES DECIMALS ±.015 3 PLACES DECIMALS ±.005 ANGLES ±.5°			
			REV. 1		REV. A	
			SCALE NONE		SHEET 1 OF 2	

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1/4 - 28 THREAD

ORIGINAL DATE: 1/23/09 DRAWN BY: J. JACKSON DRAWING APPROVAL: P. BRAVO		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CONTRACT NO.		STRUT ASSY	
SIZE: 8	CAGE CODE: D7M26	QTY: 647.7700	REV: A
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS ARE .01 FRACTIONS ARE 1/16 ANGLES: 3°		SCALE: NONE	SHEET 2 OF 2

